

Investigation of Accidents in Colombo Katunayake Expressway

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Abstract

Expressways are developed to provide high mobility and safety link between major cities in a country. Colombo Katunayake Expressway is 26 km expressway connected from Colombo to Katunayake where the major airport located.

The objective of this research to is identifying the major factors for accidents related to road characteristics, user (driver and vehicle), and environment. 100m sections of the expressway for each direction are considered in for the accident data collection.

Accident data includes severity including economical loss, weather condition, light condition and road surface condition which were recorded for one and half year period and created the data base.

It is identified that majority of accidents 66.4% of total accidents cause due to road user (driver) behavior and vehicle related problems. Severity of accident has increased when there is a combination of above factors (road, user and environment).

This would be suggested that the average accident rate is 1.3 per million vehicle kilometer. Only one fatal accident has recorded during the period which is was a motor bike entry and crash with a car and only 4.2% accident has caused serious injuries to road users.

Since this is a partially opened expressway there is an issue relates to vehicle road worthiness, during wet weather conditions speed reduction are also identified as one of the major factors related to road user behavior.

Therefore we can expect significantly reduce reduction of the accident rate through improving road user awareness and education on safe practices can be expected.

Expressways are designed to improve the safety level of road user. Ttherefore it is important to identify the any issues that reduce the safety on expressways to ensure that the high safety standards can be achieved.

The significant issue related to road characteristics is a surface water accumulation on the expressway at reverse curves due to the problem of changes of super elevation and cross fall. Therefore need to add the improved design improvement such as groves or use of porous pavement to improve drainage on such sections or by installing variable speed sign on such sections to notify drivers.

Key words: Mobility, Safety, Accidents

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